

REMARKS

35 USC § 112

Claims 36, 37 and 38 were rejected under 35 USC §112 first paragraph. Claims 37 and 38 have been cancelled without prejudice or disclaimer to any patentable subject matter therein solely to expedite prosecution of this application. Claim 36 has been amended to overcome the 35 USC § 112 rejection.

35 USC § 103

Claims 1-5, 8, 10-14, 21 and 25-49 were rejected under 35 USC §103(a) as being obvious over Schnute, U.S. Patent No. 6,239,142 either alone or with King, *Medicinal Chemistry: Principles and Practice*, 1994, pp 206-208. This rejection is respectfully transversed with respect to claims 1-5, 8, 10-14, 21 and 25-48.

Claim 49 has been cancelled without prejudice or disclaimer to any patentable subject matter and solely to expedite prosecution of this application.

The Examiner states that Schnute generically discloses an anti-herpesviral 4-oxo-4,7-dihydrothienopyridine carboxamide compound. Applicants contend that the generic compound described by Schnute at column 1, line 50, to column 3, line 57, does not describe the compounds claimed in claim 1 of the present application. In particular, the claimed compounds differ from the generic compounds of Schnute at the R⁴ substituent of the application compared to the R³ substituent of Schnute.

The generic structures and disclosures of Schnute do not suggest that the R⁴ substituents described and claimed in the present invention were contemplated by Schnute. Schnute has no generic teaching to suggest the substitution pattern of R³ that would render the claims of the present application obvious.

Additionally, the compounds of the claimed invention are more potent than the compounds disclosed by Schnute. The table at column 28, lines 10-65, of Schnute, shows the potency of Schnute's compounds. The table on page 29 of the specification shows the potency of the compounds of the application. It is apparent that the compounds of the application are more potent than the compounds of Schnute.

When Schnute's compounds, Examples 39 and 40 are considered, there is no teaching in Schnute to substitute a "six membered heteroaryl bonded via a carbon atom" for phenyl or 3-hydroxy phenyl.

In addition, the Examiner suggests that it would be obvious to substitute pyridyl for phenyl. When the data of table 1 is examined, substituting pyridyl for phenyl or 3-hydroxyphenyl gives unexpectedly better activity. In Schnute examples 39 and 40, have an IC₅₀ of .31 micromolar. In contrast, examples 1-5 and 8 have activity ranges with an IC₅₀ of .06 to .20 micromolar, having 2 to 5 times greater potency.

Applicants contend that their results show the unexpected benefit of using heteroaryl for R⁴ in the claims.

Double Patenting

Claims 1-5, 8, 10-14, 21, 25-43 and 49 were rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-21 and 23-32 of U.S. Patent No. 6,239,142, "the '142 patent" (Schnute). This rejection is respectfully traversed. The independent claims of the '142 patent are 1 and 2, the remaining claims are dependent upon either 1 or 2 or both. The claims of the instant application differ from claim 1 of the '142 patent by having a different substituents at the R² and R³ positions of the '142 patent compared to the R² and R³ substituents of the '142 patent. Claim 2 of the '142 patent is different in that the R³ substituent cannot form the claimed heteroaryl substituted hydroxyl amine moiety that is claimed in the current application. Applicants contend that the claims of the present application are patentably distinct and non-obvious over the claims of the '142 patent for the reasons given above. Therefore, applicant respectfully requests that the double patenting rejection be withdrawn.

Claims 1-43 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending Application No. 10/649,209. Applicants respectfully traverse this provisional rejection. Application No. 10/649,209 (the '209 application) claims compounds with R⁴ being phenyl optionally fused to a benzene ring, and substituted with one or more R⁶. In contrast the present application claims heteroaryl for R⁴ and there is no teaching in the present application to substitute a phenyl ring at R⁴.

Applicants' undersigned attorney may be reached by telephone at (858) 622-8060. All correspondence should continue to be directed to our address given below. The Commissioner is hereby authorized to charge all fees due, or credit any overpayment, to Deposit Account Number 500329. If any fee not submitted herewith is required for the filing or consideration of this amendment, including a fee for any necessary extension of time, please charge all such required fees to Deposit Account No. 500329.

Respectfully submitted,



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Marked up copy of the amended claims to show changes

36. (Amended) A method of treating atherosclerosis and restenosis, mediated by herpesviral infection, comprising administrating to a mammal in need thereof a therapeutic amount of a compound of claims 1 or 2.